

# US 29 South Corridor Advisory Committee Meeting #5

## Montgomery County **RAPID TRANSIT**

US 29

Silver Spring Civic Building  
Silver Spring, Maryland  
December 2, 2015  
6:30 pm to 9:00 pm



# Welcome

## Agenda:

- BRT Project Management Team Update ..... 10 min
- Project Process & Schedule ..... 20 min
- Goals & Objectives/Preliminary Purpose & Need ..... 20 min
- Conceptual Alternatives Development ..... 15 min
  - Breakout Discussions ..... 45 min
  - Discussion and Sharing ..... 30 min
- Additional Q&A ..... 10 min

# BRT Project Management Team Update

- MCDOT, SHA, MTA partnership continues uninterrupted
- Management of US 29 and MD 355 Corridor Studies transferred from SHA to MTA
  - SHA has seen increase in highway related projects, straining resources
  - MTA has available resources
  - MTA brings additional transit-related expertise
- All consultant teams will remain involved

# Questions?

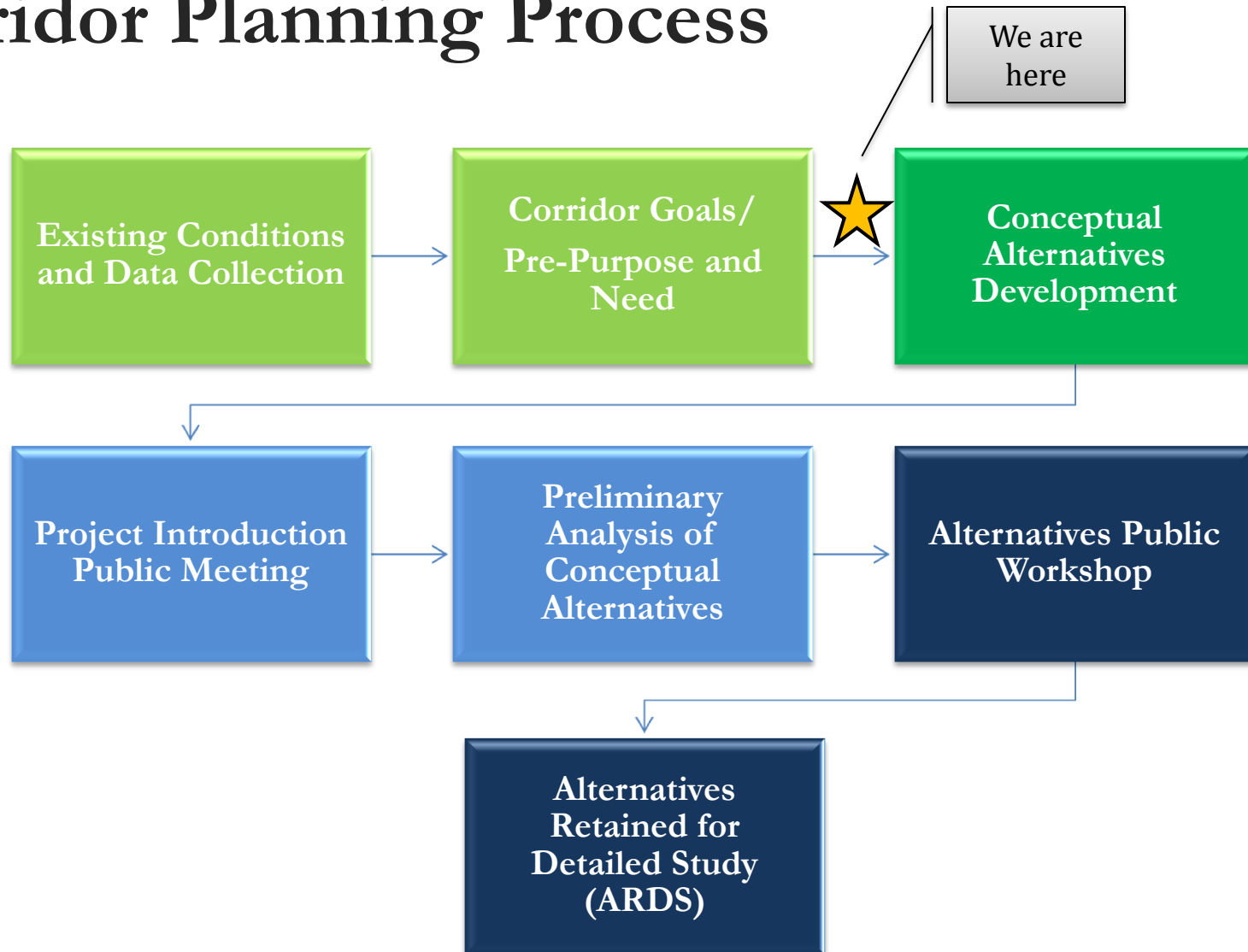
## ✓ BRT Project Management Team Update

### ✓ Q&A

- Project Process & Schedule
- Goals & Objectives/Preliminary Purpose & Need
- Conceptual Alternatives Development
  - Breakout Activity
  - Discussion and Sharing
- Additional Q&A



# Corridor Planning Process



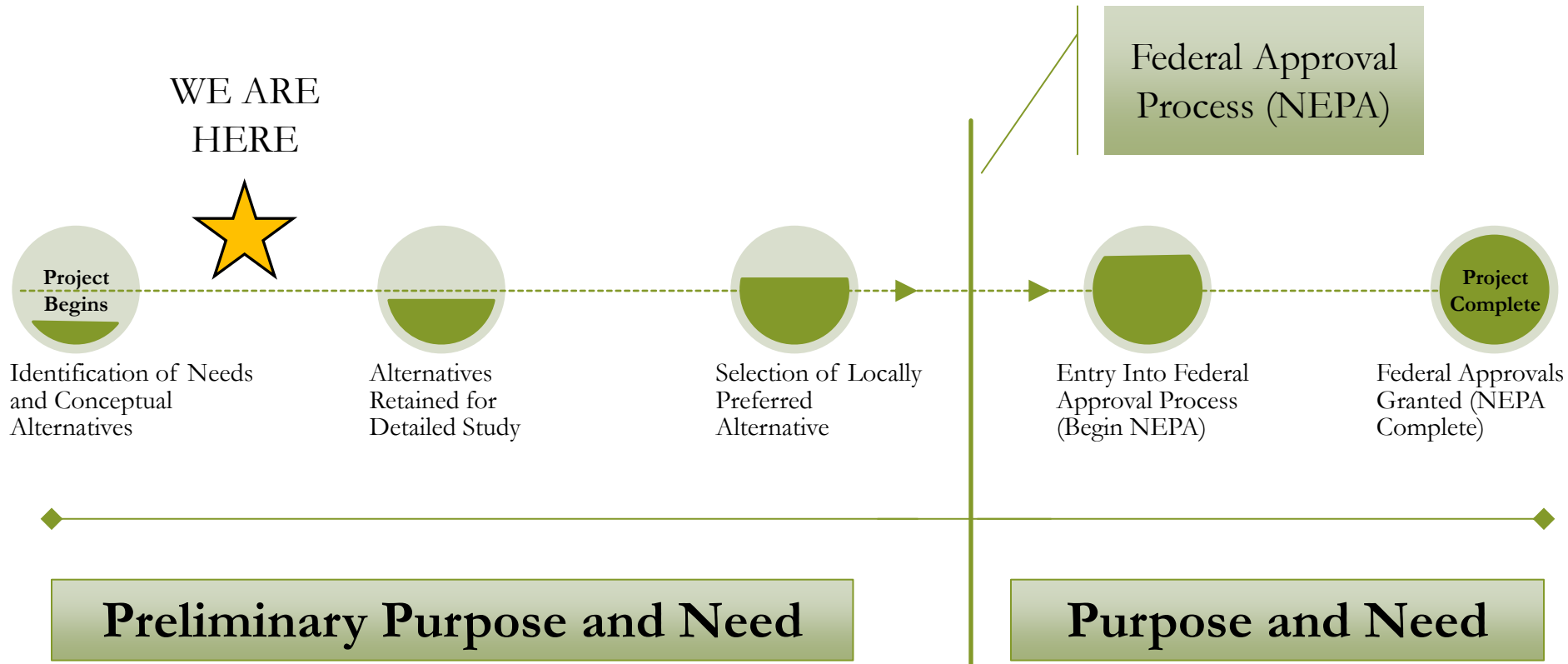
# US 29 Milestone Schedule

|   | Summer<br>2015 | Fall<br>2015 | Winter<br>2016 | Spring<br>2016 | Summer<br>2016 | Fall<br>2016 | Winter<br>2017 | Spring<br>2017 | Summer<br>2017 | Fall<br>2017 | Winter<br>2018 | Spring<br>2018 | Summer<br>2018 | Fall<br>2018 | Winter<br>2019 |
|---|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|
| Project Purpose and Need Background     |                |              | ★              |                |                |              |                |                |                |              |                |                |                |              |                |
| Conceptual Alternatives                 |                |              | ★              |                |                |              |                |                |                | ★            |                |                |                |              |                |
| Project Introduction Public Meeting     |                |              |                | ★              |                |              |                |                |                |              |                |                |                |              |                |
| Ridership, Traffic and Impacts Analysis |                |              |                |                |                | ★            |                |                |                |              |                |                |                |              |                |
| Alts. Public Workshop                   |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| ARDS Package                            |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| Alternatives Refinement                 |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| Build Traffic & Ridership               |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| Environmental Tech Analysis             |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| Draft Corridor Report                   |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| Public Workshop                         |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |
| LPA Selection                           |                |              |                |                |                |              |                |                |                |              |                |                |                |              |                |

★ CAC meetings through ARDS. Future meetings TBD based upon outcome of ARDS

# Planning Timeline

WE ARE  
HERE



# Questions?

- ✓ BRT Project Management Team Update
- ✓ **Project Process & Schedule**
  - ✓ Q&A
- Goals & Objectives/Preliminary Purpose & Need
- Conceptual Alternatives Development
  - Breakout Activity
  - Discussion and Sharing
- Additional Q&A



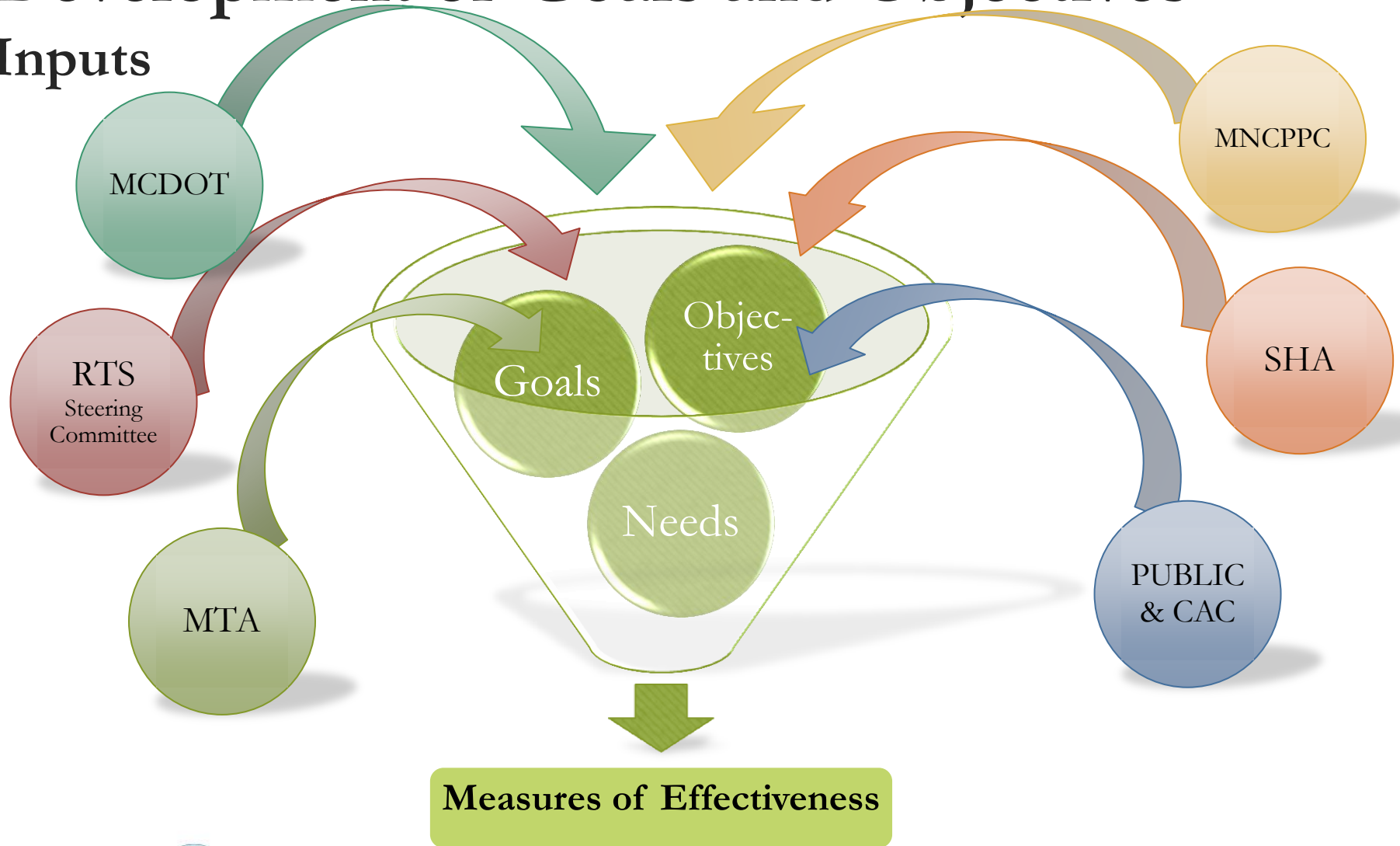
# Development of Goals and Objectives

## CAC Input

- **CAC Meeting #2**
  - Corridor Planning Study
    - Overview
    - Needs and Values Exercise
- **CAC Meeting #3**
  - Draft Preliminary Purpose and Need language
    - Purpose
    - Need
  - Existing and Projected Traffic & Transit Conditions

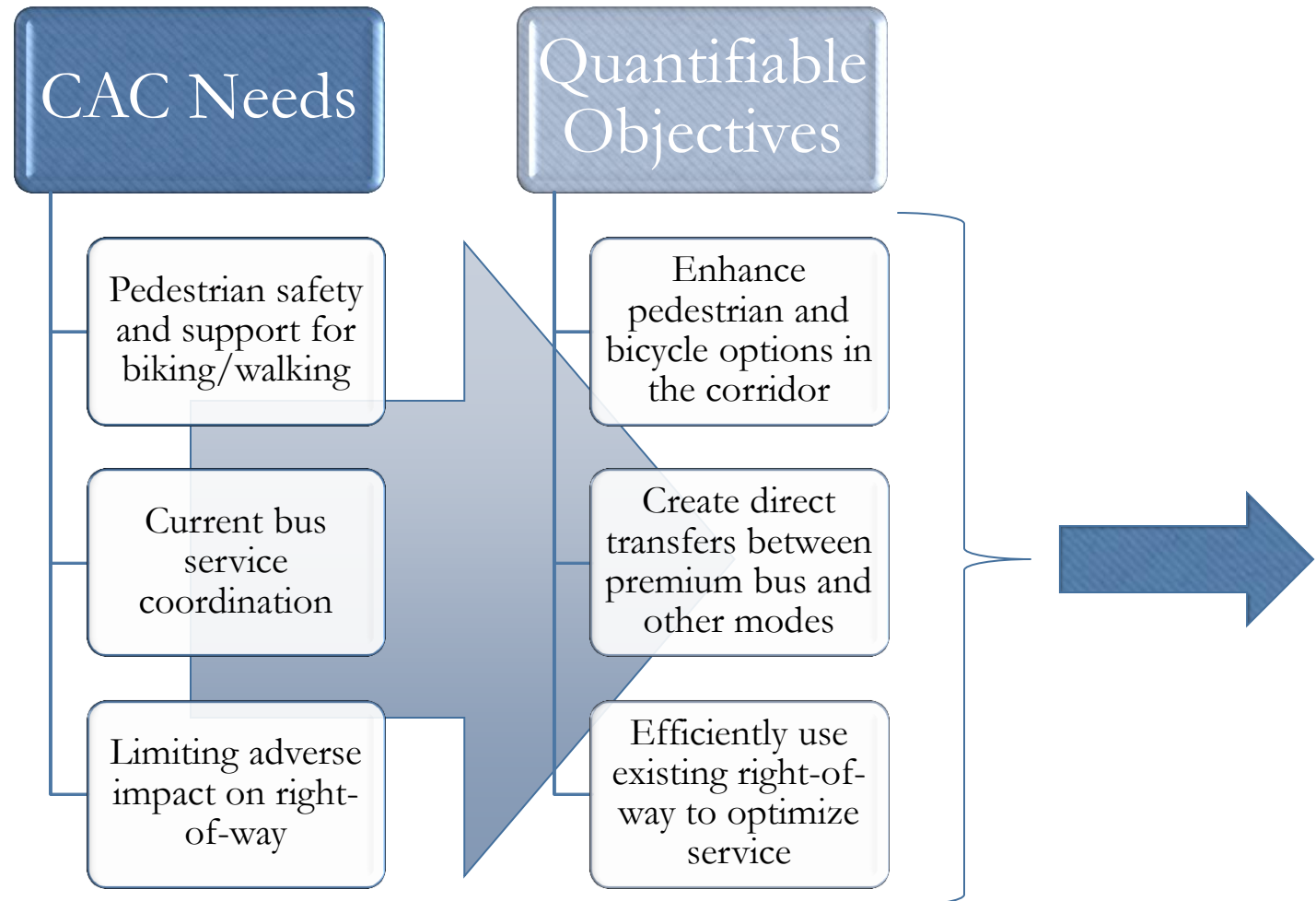
# Development of Goals and Objectives

## Inputs



# Development of Goals and Objectives

## CAC Input



## Goal

Improve Quality of Transit Service

## Objectives

Make Bus Trips Faster

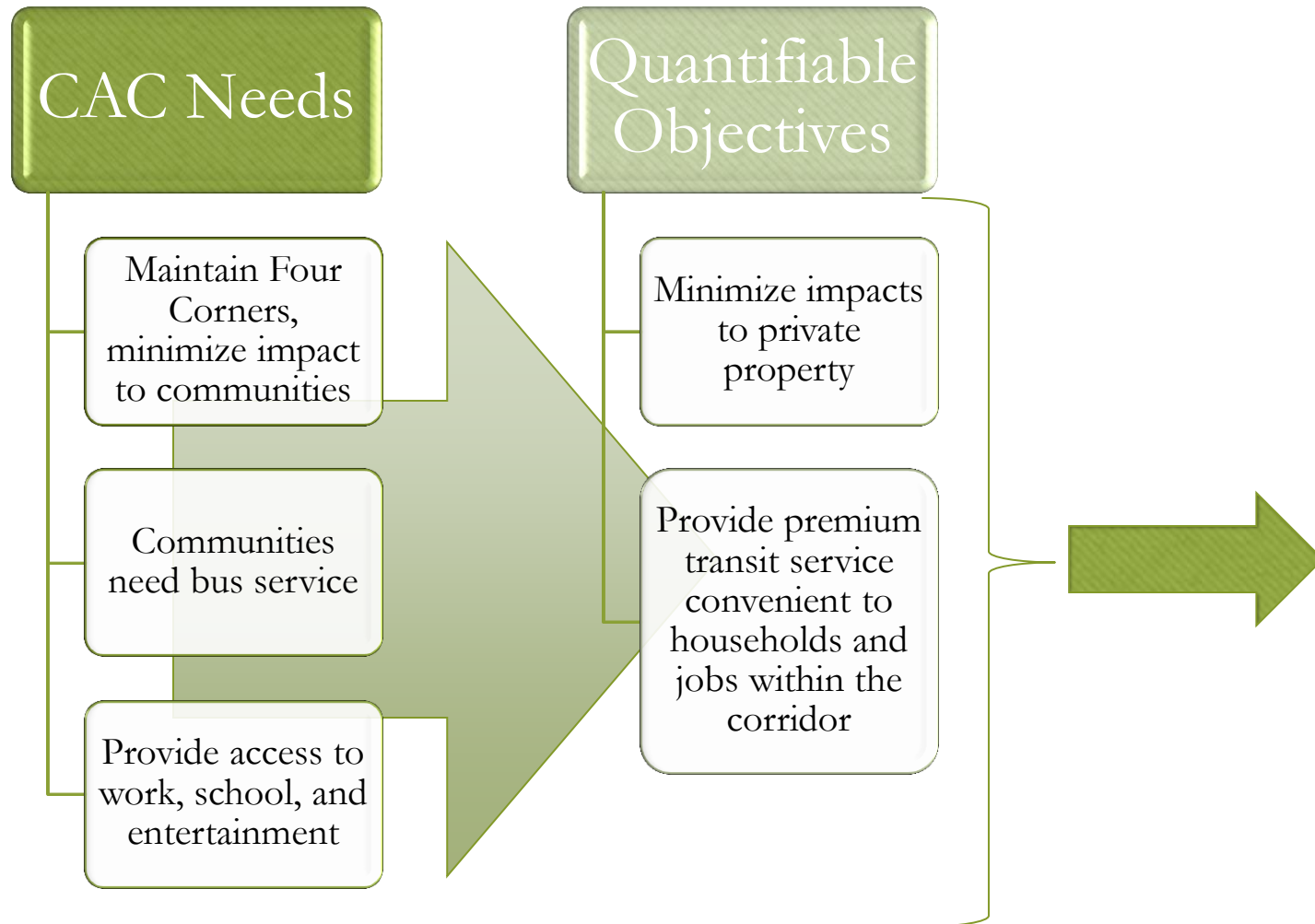
Make Door-to-Door  
Transit Travel Time  
Competitive with  
Door-to-Door Auto  
Travel

Increase Transit  
Ridership

Provide an Appealing  
Transit Service that  
will Attract New  
Riders

# Development of Goals and Objectives

## CAC Input



## Goal

Develop Transit Services that Enhance Quality of Life

## Objectives

Provide Premium Transit Service Convenient to Households and Jobs within the Corridor

Minimize Private Property Impacts

Serve Transit Dependent Populations

Engage Public in Process

## Goal

Improve Mobility Opportunities and Choices

## Objectives

Serve as Many  
Travelers as Possible  
by Efficiently Utilizing  
the Right-of-Way

Balance Travel Times  
for Automobile and  
Transit Users

Enhance Pedestrian  
and Bicycle Options in  
the Corridors

Create Direct  
Transfers Between  
Premium Bus and  
Other Modes

## Goal

Develop Transit Services that Support Master  
Planned Development

## Objectives

Improve Alternative  
Transportation Service to and  
Between Activity Centers

Increase Trips by Non-  
Automobile Modes to Support  
Development in the Master  
Plan

Select station locations that  
support infill and  
redevelopment

## Goal

Support Sustainable and Cost Effective Transportation Solutions

## Objectives

Maintain Environmental Quality

Minimize Cost of Building and Operating Transportation Services

# Purpose and Need (Revisited)

**Purpose and Need = WHAT and WHY**

## Purpose

- **WHAT** are the major goals and objectives?
- **WHY** will they be addressed by this project?

## Need

- **WHAT** are the existing or forecasted problems?
- **WHY** are these problems occurring?

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These fundamental questions provide support for later phases:

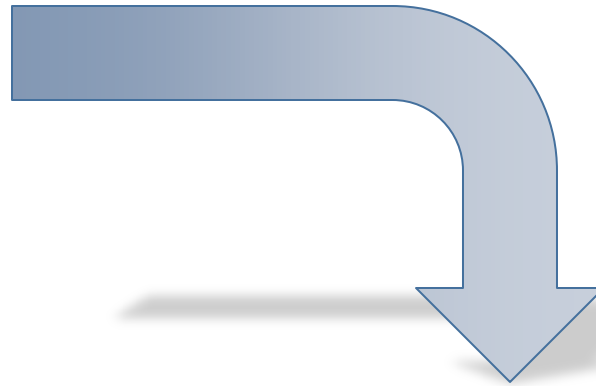
- Conceptual alternatives analysis: options for how to address the **what and why**
- Recommendations: the “best” options for how to satisfy the **what and why**

# Purpose and Need Development

## Preliminary Purpose and Need

### Role:

- Living document
- Basis for alternatives evaluation
- Follows NEPA guidelines
- Saves time in formal NEPA process

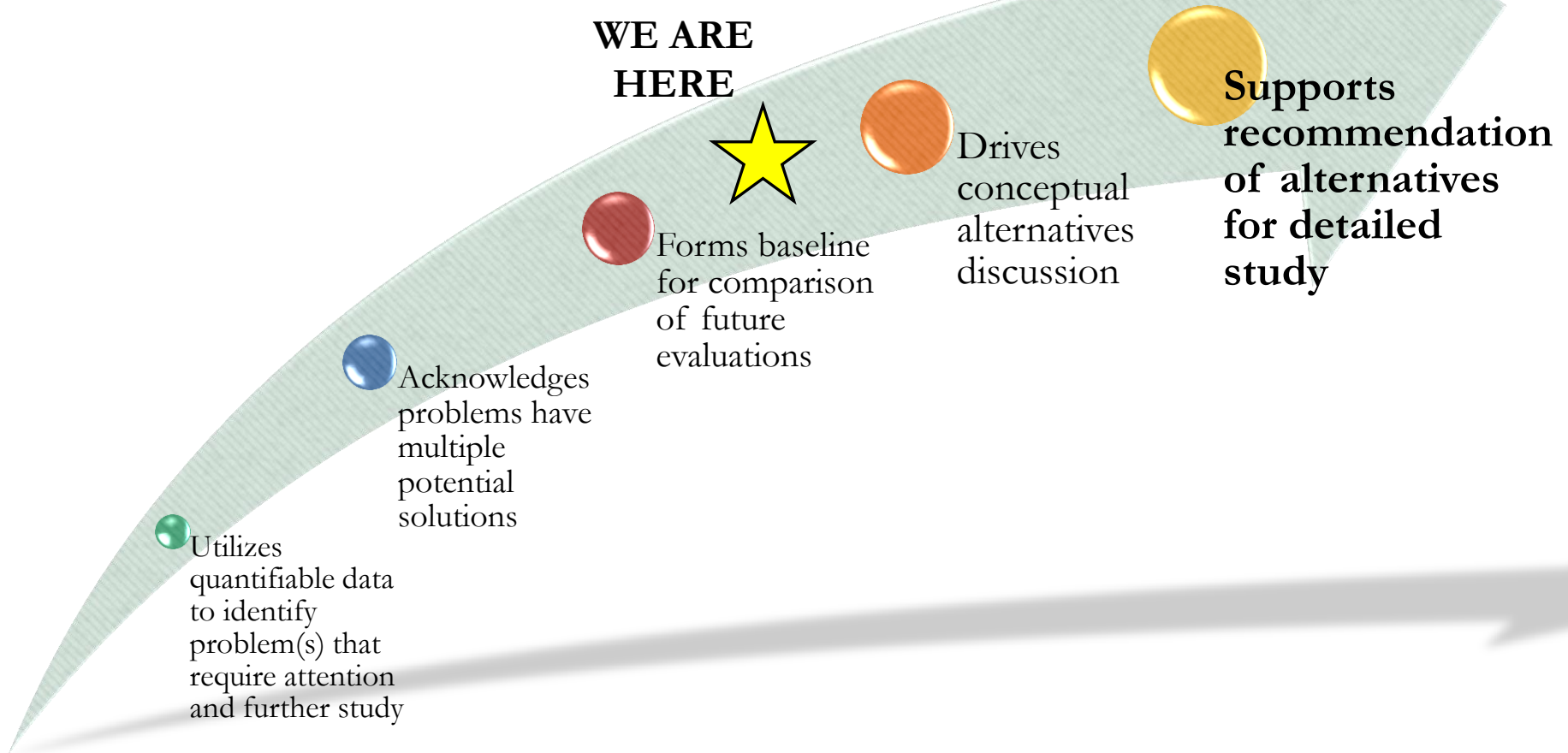


## NEPA Purpose and Need

### Role:

- Basis for Selected Alternative Evaluation
- Provide consensus between regulatory agencies
- Adopted by federal lead agency

# Preliminary Purpose and Need Process



# Preliminary Purpose & Need

## Document Next Steps

- **CAC Member Review and Comment**
  - Facilitators will email link to Draft Document in mid-December
  - Provide comments by end of January 2016
  - CAC Member comments will be combined with comments from the Spring public meetings

# Questions?

- ✓ BRT Project Management Team Update
- ✓ Project Process & Schedule
- ✓ **Goals & Objectives/Preliminary Purpose & Need**
  - ✓ Q&A
- Conceptual Alternatives Development
  - Breakout Activity
  - Discussion and Sharing
- Additional Q&A



# Conceptual Alternatives Development Process

- Work completed:
  - Existing conditions evaluation
  - Goals and Objectives
  - Needs identification
- Next Steps:
  - **Obtain CAC Member input**
  - Complete Draft Preliminary Purpose and Need
  - Develop conceptual alternatives
  - Present conceptual alternatives for public comment

# What Makes a Conceptual Alternative?

## Components:

1. Running way
  - Physical location and interaction with surrounding environment for the BRT
2. Station locations, surroundings, and access
  - Specific location of BRT stops
3. Service and operations
  - BRT operational characteristics (hours of service/frequency, bus routing)

# BRT Running Way Options

## Introduction:

- Six BRT Running Way options have been identified for consideration
- The proposed six options can be mixed and matched along different segments of the corridor
- Location and dimensions of proposed roadway elements will vary throughout the corridor
- The six running way options illustrate the interaction between vehicles and the BRT, as they could generally be applied throughout the corridor
- **NOT EVERY OPTION IS APPROPRIATE FOR EVERY SEGMENT OF THE US 29 CORRIDOR**

# Conceptual Alternatives Components: Running Way

## Considerations:

- BRT operations (speed, reliability)
- Traffic operations
- Ridership
- Connectivity
- Potential impacts

# BRT in Mixed Traffic

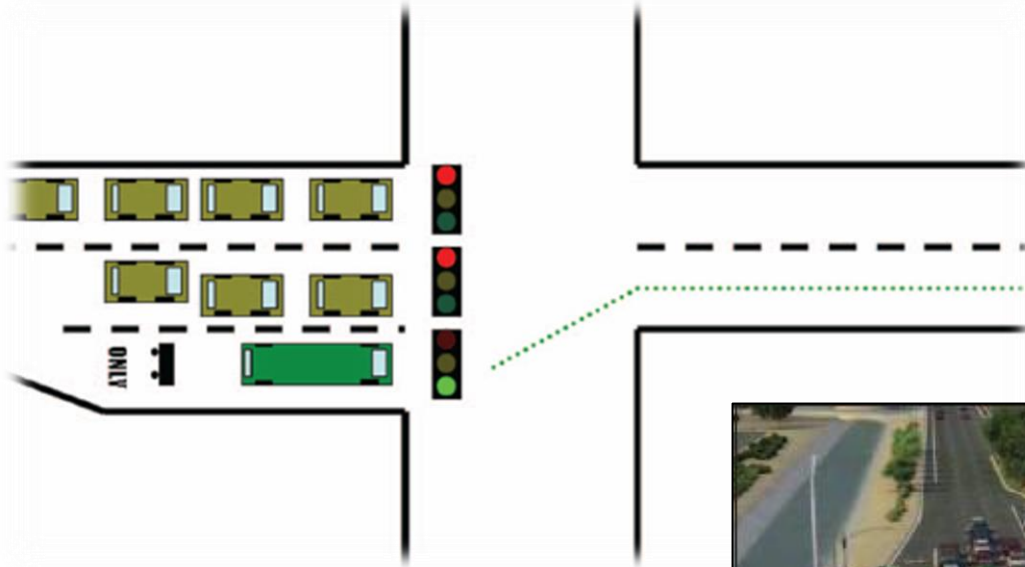


Brampton, Canada

Brampton, Canada



# BRT Queue Jump



Queue Jump concept



# Reversible/Bi-Directional BRT Lane



Eugene, Oregon

# Dedicated Median BRT Lanes



Alexandria, Virginia

Chicago, Illinois (concept)



# Dedicated Curb BRT Lanes



Chicago, Illinois (concept)



Snohomish County, Washington

# Conceptual Alternatives Components:

## Station locations, surroundings, and access

### Considerations:

- Adjacent land uses
- Proposed development
- Ease of access (vehicles, bicycles, pedestrians)
- Connectivity to existing transit riders and services
- Proximity to other BRT stations

# Station Configurations – Median



Eugene, Oregon

Changzhou, China



# Station Configurations – Curb



Brooklyn, New York

Brooklyn, New York

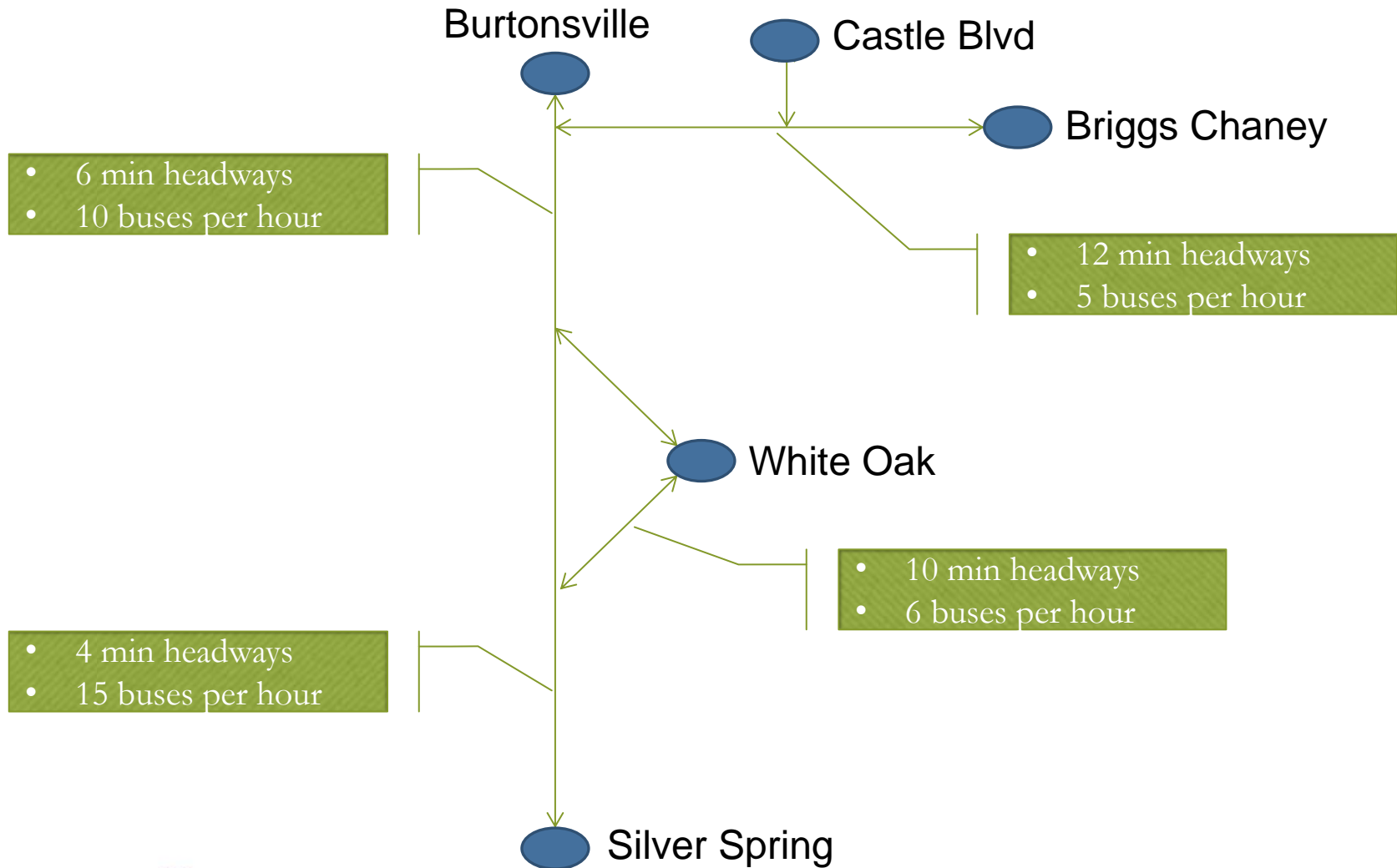


# Conceptual Alternatives Components: Service and Operations

## Considerations:

- Bus Routing (Spurs)
- Transfer Points
- Headway (time between buses)
- Frequency (buses per hour)

# Example Operational Pattern



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Legend

- Proposed Limits of BRT in Shared Lanes / Mixed Traffic
- Proposed Limits of Dedicated BRT Lanes
- Proposed Limits of Dedicated Peak-Direction Reversible BRT Lane
- Proposed BRT Station

Project Limit

North #2

North #1  
South #3

South #2

South #1

Silver Spring Transit Center

US 29 BRT Corridor Study  
From Silver Spring Transit Center to Burtonsville Park & Ride

Countywide Transit Corridors  
Functional Master Plan Recommendations

SHA  
State Highway Administration

MTA  
Maryland

County of Montgomery

Date  
October 2015

Figure  
XX

# Conceptual Alternatives: Breakout Discussion

## Three Topics to Discuss:

1. **Running Way** - What running way(s) may be appropriate for this segment of US 29?
2. **Station locations, surroundings, and access** - What station locations may be appropriate for this segment of US 29?
3. **Service and operations** - What activity centers should the BRT system serve?

# South #1

- Limits: Silver Spring Transit Center to Lanark Way
- Posted Speeds: 30 to 40 mph
- Proposed Stops: Transit Center, Fenton St/Spring St, Franklin Ave
- Roadway Sections: Six Lane Divided & Undivided, Continuous Sidewalks
- Major Features: Densely developed downtown Silver Spring, Suburban residential neighborhoods, I-495 Interchange, Reversible Lane System, Sligo Creek Park, Ellsworth Park, Historic Properties
- Existing Transit: Metro, Metrobus, RideOn, MTA

# South #2

- Limits: Sligo Creek Parkway to Lockwood Drive
- Posted Speed: 35 to 40 mph
- Proposed Stops: Franklin Ave, University Blvd, Lockwood Dr
- Roadway Sections: Six Lane Divided, Closed Section Curb, Open Section Shoulders, Intermittent Sidewalks
- Major Features: Commercial development at Four Corners and Burnt Mills, Suburban residential neighborhoods, I-495 Interchange, Sligo Creek Park, Northwest Branch Park, Blair High School, Historic Properties
- Existing Transit: Metrobus, RideOn, MTA

# South #3

- Limits: Lockwood Drive to Industrial Parkway and Lockwood Drive/Stewart Lane Spur
- Posted Speeds: 40 to 50 mph (US 29), 30 mph (Lockwood/Stewart)
- Proposed Stops: Lockwood Dr, Oak Leaf Dr, White Oak Transit Center
- Roadway Sections: Six Lane Divided (US 29), Two Lane Undivided (Lockwood/Stewart), Closed Section Curb, Intermittent Sidewalks
- Major Features: Dense residential and commercial development at MD 650/White Oak, Suburban residential neighborhoods, MD 650 Interchange, Paint Branch Stream, Stonehedge Local Park,
- Existing Transit: Metrobus, RideOn, MTA

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# Additional Questions & Answers



# Adjournment